

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
22 February 2001 (22.02.2001)

PCT

(10) International Publication Number
WO 01/12252 A1(51) International Patent Classification⁷: **A61M 5/20.** (74) Agent: COHEN, Alan, Nicol; 2 Grove Place, Tatsfield, S/42, S/46, S/32 NR Westerham, Kent TN16 2BB (GB).(21) International Application Number: **PCT/GB00/03061**(81) Designated States (*national*): AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW.

(22) International Filing Date: 14 August 2000 (14.08.2000)

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

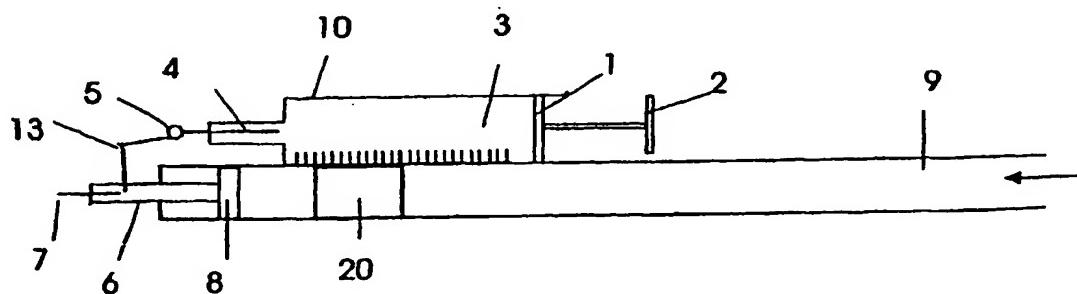
(25) Filing Language: English

Published:

— With international search report.

(26) Publication Language: English

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(30) Priority Data:
9919218.9 13 August 1999 (13.08.1999) GB(71) Applicant (*for all designated States except US*): **IM-PRINT PHARMACEUTICALS LIMITED [GB/GB]; 53 Langton Road, East Molesey, Surrey KT8 2HX (GB).**(72) Inventor; and
(75) Inventor/Applicant (*for US only*): **CROCKER, Peter, John [GB/GB]; 53 Langton Road, East Molesey, Surrey KT8 2HX (GB).**(54) Title: **INJECTION MEANS****WO 01/12252 A1**

(57) Abstract: Injection apparatus has the needle of low mass struck by a fast moving block causing a needle to be accelerated very rapidly and easily to high speeds to reduce the pain of penetration and then, when the needle has penetrated the skin the substance is injected.